UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,990	02/07/2007	Regis Peytavi	CU-5127 BWH	3406

26530 7590 10/06/2010

LADAS & PARRY LLP
224 SOUTH MICHIGAN AVENUE
SUITE 1600
CHICAGO, IL 60604

EXAMINER	
PREGLER, SHARON	
ART UNIT	PAPER NUMBER
1772	

MAIL DATE	DELIVERY MODE
10/06/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,990	PEYTAVI, REGIS	
	Examiner	Art Unit	
	Sharon Pregler	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28,30-40,42-47 and 50-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28,30-40,42-47 and 50-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 July 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Examiner acknowledges applicant's reply filed 6 July 2010, containing remarks and amendments to the pending claims.

2. Claims 1-28, 30-40, 42-47, & 50-58 are pending. Claims 29, 41, 48-49 are cancelled.

3. The amendments and remarks regarding the rejection of claims 17, 28, 47, 57, & 58 under 35 USC § 112 2nd paragraph are sufficient. Examiner withdraws the rejection of claims 17, 28, 47, 57, & 58 under 35 USC § 112 2nd paragraph.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. ***Claims 1-5, 7-19, 30-38, 47, 50-53, & 57-58 are rejected under 35 U.S.C. 103(a) as being unpatentable by Mathies US Pre-Grant Publication in view of Herst US Patent 5,922,288.***

7. **Regarding claims 1, 2, 7, & 12 Mathies teaches a** microfluidic flow cell *(top planar member 224, [0087], figure 6-6b)* for removably interfacing with a removable-member *(bottom planar member 222, substrate may be attachable and*

removable from the device [0012]) for performing a reaction therebetween *([0011])*, said microfluidic flow cell comprising:

8. at least one reaction portion or cavity (regarding claim 7) *(reaction chamber 225/226, figure 6-7, [0011]-[0012], [0023], [0088], & [0103])* defining with the removable-member a reaction chamber *(forming within [0012])* when said microfluidic flow cell and said removable-member are in an interfaced position thereof; and

9. at least one fluid-receiving portion, *(multiple reservoirs, multiple introduction channels, [0089])* or conduit (regarding claim 2) formed within said microfluidic flow cell (regarding claim 12) *(sample introduction channel 230, figure 6 [0089])* formed within said microfluidic flow cell (regarding claim 12) *(top planar member 224, [0087], figure 6-6b)*, for receiving a fluid therein and being in fluid communication with said reaction chamber *(connected to reaction chamber [0023], [0089])*;

10. a dispensing portion *(channel 234)* in fluid communication with said reaction chamber, said dispensing portion comprising a dispensing channel *(channel 234)* formed within said microfluidic cell;

11. wherein when in said interfaced position, said microfluidic flow cell is adapted to allow for the fluid in said fluid-receiving portion to flow to said reaction chamber *([0028], [0087]-[0089])*. *(See figures 6-7, [0011]-[0023], & [0088]-[0103])*.

12. Mathies does not explicitly teach the dispensing portion in fluid communication with the external environment of the microfluidic flow cell, and for excess fluid in the reaction chamber to flow into the external environment via said dispensing portion. Mathies teaches a waste chamber *(246)* that is in fluid communication with the dispensing portion *(channel 234)* but does not teach communication with the external environment.

13. However, it is well known in the art to have an outlet that is in communication with the external environment for removal of fluid or venting purposes. Furthermore, Herst teaches a device with a reaction chamber, at least one port for moving material between the reaction chamber and the environment external to the device, at least one reagent chamber comprising a premeasured amount of reagent, at least one waste chamber, and a means for moving said reaction chamber into fluid communication with each of the port, reagent and waste chambers *(column 2 lines 39-49)*.

14. Therefore it would have been obvious to modify the device of Mathies to have means for communication with the external environment for fluid to flow or vent.

15. **Regarding claims 3-4, & 14 Mathies teaches the** microfluidic flow cell according to claim 1, further comprising a plurality of separate fluid-receiving portions (regarding claim 3) *(See 230 in figure 6 and channel 232, [0089])* and separate conduits (regarding claim 4) formed within said microfluidic flow cell (regarding claim 14) *(See 230 in figure 6 and channel 232, [0089])* each receiving a respective fluid, each of said separate fluid-receiving portions being in fluid communication with a common said reaction chamber *(chamber 235, figure 6)*. *(See figure 6, [0089])*.

16. **Regarding claims 5, & 16-18 Mathies teaches the** microfluidic flow cell according to claim 4 within the microfluidic flow cell (regarding claim 16), *([0028])*, but does not explicitly teach said plurality of separate conduits meet at a valve for fluid communication therewith, said valve being in fluid communication with said common reaction chamber *(chamber 225)*(regarding claim 5) formed within said microfluidic flow cell (regarding claim 18) *(See figure 6)* valve-cavity (regarding claim 17) within the microfluidic cell (regarding claim 27).

17. However, Mathies teaches control within the microfluid capillaries comprising the use of valves. *(See [0028] & [0075])*.

18. It is within ordinary skill in the art and would have been obvious to place a valve in the conduits, and channels above for the benefit of controlling fluid flow in the microfluidic device.

19. **Regarding claim 8, Mathies teaches the** microfluidic flow cell according to claim 7, wherein said cavity comprises a structure selected from the group consisting of indentations and at least one groove *(See [0023])*.

20. **Regarding claim 9, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said fluid-receiving portion comprises a reagent chamber *(chamber 225, figure 6)*, said fluid comprising a reagent *([0128])*.

21. **Regarding claim 10, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said fluid-receiving portion comprises a fluid-receiving chamber *(reservoirs 240, 242l 244, figure 6, [0089])* formed within said microfluidic flow cell *(top planar member 224, [0087], figure 6-6b)*. *(See figure 6, [0089])*.

22. **Regarding claim 11, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said fluid-receiving portion comprises a fluid-receiving cavity

(reservoirs 240, 242l 244, figure 6, [0089]) defining a fluid-receiving chamber with said removable-member when said microfluidic flow cell and said removable-member are in said interfaced position *(may from chamber or cavities in [0012])*. *(See figure 6, [0012], & [0089])*.

23. **Regarding claim 13, Mathies teaches the** microfluidic flow cell according to claim 2 further comprising a conduit cavity *(within channel 230)*, said conduit-cavity defining said conduit when said microfluidic flow cell and said removable-member are in said interfaced position *(See [0012])*. *(See figure 6, [0012])*.

24. **Regarding claim 15, Mathies teaches the** microfluidic flow cell according to claim 3, wherein at least one of said plurality of conduits *(channels 230, 232)* is defined by a conduit in said microfluidic flow cell when said microfluidic flow cell and said removable member are in said interfaced position *(See [0012])*.

25. **Regarding claim 19, Mathies teaches the** microfluidic flow cell according to claim 18, further comprising a common channel-cavity *(within channel 230)*, said common channel-cavity defining said common channel when said microfluidic flow cell and said removable-member are in said interfaced position *([0012])*. *(See figure 6, [0012], & [0088])*.

26. **Regarding claim 30, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said dispensing portion comprises a dispensing channel *(channel 234)*, said microfluidic flow cell further comprising a dispensing channel-cavity *(within channel 234)*, said dispensing channel-cavity defining said dispensing channel when said microfluidic flow cell and said removable-member are in said interfaced position *(See [0012])*. *(See figure 6, [0012] & [0088-89])*.

27. **Regarding claim 31, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said microfluidic flow cell comprises hydrophobic material *(plastics & silicon based materials [0087] & [0138])*.

28. **Regarding claim 32, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said microfluidic flow cell comprises a substrate *(See figure 6)*.

29. **Regarding claims 33 & 34, Mathies teaches** microfluidic flow cell according to claim 32, wherein said substrate comprises elastomeric material (regarding claim 35) *(See [0087])* said elastomeric material comprises PDMS (regarding claim 36) *(plastics & silicon based materials [0087])*.

30. **Regarding claim 35, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said removable-member comprises a support *(bottom planar*

member 222, substrate may be attachable and removable from the device [0012]) for performing a reaction thereon *(See figure 6)*.

31. **Regarding claim 36 Mathies teaches the** microfluidic flow cell according to claim 35, wherein said support comprises hydrophobic material *(plastics & silicon based materials [0087] for example PDMS, a well known material to fabricate microfluidic chips is inherently hydrophobic)*.

32. Regarding claim 37, this claim is regarded as intended use and does not add structural weight to the apparatus claim.

33. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

34. **Regarding claim 38, Mathies teaches the** microfluidic flow cell according to claim 37, wherein said support comprises glass *([0087])*.

35. **Regarding claim 47, Mathies does not explicitly teach the flow cell** adapted to be submitted to centrifugal forces so as to provide for the fluid in said fluid-receiving portion to flow to said reaction chamber. Mathies teaches actuations include actuation forces such as gravity *([0019], [0075)*, capillary force *([0011], [0019])*, positive and negative displacement force *([0075])*, *([0090])*, pneumatic drive force *([0068])*. Centrifugation will ultimately contribute to the actuation forces above. Furthermore, centrifugation is well known as an actuation for displacing fluids, and thus would have been obvious to use the structure defined by Mathies in a centrifugation fluidic chip or device.

36. **Regarding claims 50-53 & 56, Mathies teaches the** microfluidic flow cell according to claim 1 but does not explicitly teach at least one vent *([0019])*, said vent being in fluid communication with the ambient environment and with said fluid receiving portion (regarding claim 51), *([0028]),* between ambient environment and reaction chamber (regarding claim 50), between ambient environment and conduit (claim 52) and ambient environment and valve (regarding claim 53) *([0060])* and between ambient environment and dispensing portion. *(See figure 1, [0019], [0028], [0058], [0060])*.

37. Mathies teaches control within the microfluid capillaries comprising the use of vents. *(See figure 1, 9 [0019], [0028], [0060] & [0075])* for the benefit of controlling fluid flow through positive and negative pressure *([0060])*.

38. It is within ordinary skill in the art and would have been obvious to place a vent between the environment and reaction chamber, environment and fluid receiving portion, environment and conduit, environment and valve, and environment and dispensing portion, above for the benefit of controlling fluid flow in the microfluidic device through positive and negative pressure.

39. **Regarding claim 57, Mathies teaches the** microfluidic flow cell according to claim 1, wherein said removable member comprises a microfluidic flow cell *(see figure 6)*.

40. **Regarding claim 58, Mathies teaches the** microfluidic flow ceil according to claim 1, wherein said removable-member comprises a support *(bottom planar member 222, substrate may be attachable and removable from the device [0012])* comprising a support cavity *(within bottom planar member 222)* defining said reaction chamber when in said interfacing position *(see [0012])*, said reaction cavity comprising a fluid outlet *(outlet in [0073])* in communication with said reaction chamber. *(See [0012], Figure 6, [0073]).*

41. Claims 6, 20-28, 54 & 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathies US Pre-Grant Publication in view of Herst US Patent 5,922,288 in further view of Parce et al. US Patent 5,869,004 (hereinafter "Parce").

42. **Regarding claim 6 Mathies in view of Herst teaches the** microfluidic flow cell according to claim 5, wherein said fluid communication between said reaction chamber and said valve *([0028] & [0075])* but does not teach the common channel.

43. However in the analogous art of microfluidics, Parce teaches a common channel, *(main channel 104, figure 1)* with channel-cavity *(within main channel 104)* that are in fluid connection with a series of parallel channels *(122, 124, 126, 128…)* with a series of fluid sources *(106, 110, 112, 114…)* that terminate at an end chamber *(reservoir 108)* formed within said microfluidic flow cell (regarding claim 23) *(structure 102)(See figure 1,* for the benefit of mixing a series of reactants or fluids to be collected at a terminus *(See column 7 lines 20-45)*.

44. Therefore it would have been obvious to one of ordinary skill in the art to rearrange the channels of Mathies and incorporate a the fluidic geometry of Parce for the benefit of mixing a series of reactants or fluids to be collected at a terminus.

45. Mathies teaches control within the microfluid capillaries comprising the use of valves. *(See [0028] & [0075])*.

46. It is within ordinary skill in the art and would have been obvious to place a valve in the channels above for the benefit of controlling fluid flow in the microfluidic device.

47. **Regarding claim 20 & 23-24, Mathies in view of Herst teaches the** microfluidic flow cell according to claim 1, further comprising a plurality of separate fluid-receiving portions *(reservoirs 240, 242)* but does not teach each said fluid-receiving portion of said plurality being in fluid communication with a common channel, channel-cavity (regarding claim 24) said common canal being in communication with said reaction chamber. *(Reservoirs 240, channel 230, and chamber 225 are fluidically connected, through channels 230/232, figure 6)*.

48. However in the analogous art of microfluidics, Parce teaches a common channel, *(main channel 104, figure 1)* with canal-cavity *(within main channel 104)* that are in fluid connection with a series of parallel channels *(122, 124, 126, 128…)* with a series of fluid sources *(106, 110, 112, 114…)* that terminate at an end chamber *(reservoir 108)* formed within said microfluidic flow cell (regarding claim 23) *(structure 102)(See figure 1,* for the benefit of mixing a series of reactants or fluids to be collected at a terminus *(See column 7 lines 20-45)*.

49. Therefore it would have been obvious to one of ordinary skill in the art to rearrange the channels of Mathies and incorporate the fluidic geometry of Parce for the benefit of mixing a series of reactants or fluids to be collected at a terminus.

50. **Regarding claims 21, 25 & 26 Mathies in view of Herst teaches the** microfluidic flow cell according to claim 20, but does not explicitly teach a pair of elongate bores meeting at a common part of said common canal (regarding claim 21) are formed within said microfluidic flow cell (regarding claim 25) wherein said elongate bored are formed by complementary elongate bore portions defined by said microfluidic flow cell and said removable-member when in said interfaced position (regarding claim 26).

51. In the analogous art of microfluidic devices Parce teaches a common channel, *(main channel 104, figure 1)* that are in fluid connection with a series of bores *(parallel channels 122, 124, 126, 128…)* with a series of fluid sources *(106, 110, 112, 114…)* that terminate at an end chamber *(reservoir 108)* formed within said microfluidic flow cell (regarding claim 23) *(structure 102)(See figure 1,* for the

benefit of mixing a series of reactants or fluids to be collected at a terminus *(See column 7 lines 20-45)*.

52. Therefore it would have been obvious to one of ordinary skill in the art to rearrange the channels of Mathies and incorporate the fluidic geometry of Parce for the benefit of mixing a series of reactants or fluids to be collected at a terminus.

53. **Regarding claims 22, 27, & 28 Mathies in view of Hest teaches the** microfluidic flow cell according to claim 21, but does not explicitly teach that said common part comprises a valve (regarding claim 22), wherein the valve (regarding claim 27, and valve-cavity (regarding claim 28), is formed within the microfluidic flow cell, said valve-cavity defining said valve when said microfluidic flow cell and said removable-member are in said interfaced position.

54. However, Mathies teaches control within the microfluid capillaries comprising the use of valves. *(See [0028] & [0075])* for the benefit of controlling fluid flow in the microfluidic device and actuation through an external source.

55. It is within ordinary skill in the art and would have been obvious to place a valve in the microfluidic device and form a valve-cavity and environment above for the benefit of controlling fluid flow in the microfluidic device and actuation through an external source.

56. **Regarding claims 54 & 55, Mathies in view of Herst teaches** the microfluidic flow cell according to claim 2, further comprising at least one vent, but does not teach said vent being in fluid communication with the ambient environment and with said common canal.

57. However in the analogous art of microfluidics, Parce teaches a common channel, *(main channel 104, figure 1)* with canal-cavity *(within main channel 104)* that are in fluid connection with a series of parallel channels *(122, 124, 126, 128…)* with a series of fluid sources *(106, 110, 112, 114…)* that terminate at an end chamber *(reservoir 108)* formed within said microfluidic flow cell (regarding claim 23) *(structure 102)(See figure 1,* for the benefit of mixing a series of reactants or fluids to be collected at a terminus *(See column 7 lines 20-45)*.

58. Therefore it would have been obvious to one of ordinary skill in the art to rearrange the channels of Mathies and incorporate a the fluidic geometry of Parce for the benefit of mixing a series of reactants or fluids to be collected at a terminus.

59. Mathies teaches control within the microfluid capillaries comprising the use of vents. *(See figure 1, 9 [0019], [0028], [0060] & [0075])* for the benefit of controlling fluid flow through positive and negative pressure *([0060])*.

60. It is within ordinary skill in the art and would have been obvious to place a vent in the common canal and environment of Parce above for the benefit of controlling fluid flow in the microfluidic device through positive and negative pressure.

61. Claims 39-40, & 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathies US Pre-Grant Publication in view of in view of Herst US Patent 5,922,288 in further view of Chen et al. US Pre-Grant Publication 2003/0087292 (hereinafter "Chen").

62. **Regarding claims 39 & 40, Mathies in view of Herst teaches the** microfluidic flow cell according to claim 1, but does not teach said support comprising a microarray (claim 39) with bioprobe spots (regarding claim 40).

63. In the analogous art of microfluidics, Chen teaches a substrate with a microarray with individual probe spots, *(See Chen figures 1-2, [0004-5])*, for the benefit of targeting molecules within a small area *([0005]*.

64. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the microarray and probe spots with the substrate of Mathies for the benefit of targeting molecules within a small area.

65. **Regarding claims 42 Mathies in view of Herst teaches the** microfluidic flow cell according to claim 39 further comprising a plurality of fluid-receiving portions *(multiple reservoirs, multiple introduction channels, [0089])* and a plurality of channels in fluid communication therewith *(channels 230 & 232)*, said channels being in communication with said reaction chamber *(figure 6)*. *(See figure 6, [0012], [0088-89])*.

66. **Regarding claims 43 & 44, Mathies in view of Herst teaches the** microfluidic flow cell according to claim 42, wherein said plurality of channels access individual spots of said microarray (regarding claim 43) and individual groups of spots of said microarray (regarding claim 44).

67. In the analogous art of microfluidics, Chen teaches an array of probes deposited on a surface of the substrate; and a cover having a channel *(figure 42 shows other embodiments of the channel structure including pluralities of channels)*

being coupled to the substrate such that a target fluid flowing through the channel cavity contacts each probe in the array of probes *([0014])* for the benefit of targeting molecules within a small area *([0004])*. *(See Chen [0004-5], [0014-5], [0070-73] Figures 1-2 & 42)*.

68. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the channels with the microarray and probe spots with the substrate of Mathies for the benefit of targeting molecules within a small area.

69. Claims 45 & 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathies US Pre-Grant Publication in view of in view of Herst US Patent 5,922,288 in further view of Guigan US Patent 4,788,154 (hereinafter "Guigan").

70. **Regarding claim 45 & 46, Mathies in view of Herst teaches** the microfluidic flow cell according to claim 1, but does not teach an enclosure (regarding claim 45) that comprises a removable seal (regarding claim 46.

71. In the analogous art of microfluidic devices, Guigan teaches a removable cover *(lid 18, figure 2)* for the benefit of removing and reattaching the cover to the device for analysis or cleaning.

72. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the cover of Guigan with the device of Mathies for the benefit of removing and reattaching the cover to the device for analysis or cleaning.

Response to Arguments

73. Applicant's arguments with respect to claim 1, regarding how the amended claims overcome the prior art, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

74. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon Pregler whose telephone number is (571)270-5051. The examiner can normally be reached on Mon - Fri 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sharon Pregler/
Examiner, Art Unit 1797

/Jill Warden/
Supervisory Patent Examiner, Art Unit 1797